

ABSTRACT

A method for supplying solvent to an ultra-high pressure liquid chromatography system using a hydraulic amplifier. The hydraulic amplifier system includes a hydraulic cylinder comprising a primary piston chamber in which a primary piston is disposed and a secondary piston chamber in which a secondary piston is disposed. The cross-sectional area of the primary piston is larger than the cross-sectional area of the secondary piston. The difference in the cross-sectional areas of the pistons creates an amplification of the pressure in the primary piston chamber and a reduction in flow rate.